

A new species of *Triphleps* (Hemiptera-Heteroptera, Anthocoridae) predaceous on the citrus thrips (*Scirtothrips aurantii* Faure) in the Transvaal

by

A. J. HESSE,
Entomologist, South African Museum, Cape Town.

Professor J. C. Faure, professor of Entomology at the University of Pretoria, has very kindly submitted to me for identification a number of specimens of a species belonging to the genus *Triphleps* Fieb. which, according to Mr. E. C. G. Bedford a research student, is predaceous on the South African citrus thrips (*Scirtothrips aurantii* Faure) in the Transvaal. According to the literature at my disposal the following thirteen species of *Triphleps* have been described or recorded from Africa: a single species, *brunnescens* Popp., from South Africa; *naivashae* Popp., *alpina* Popp., *lobeliae* Popp., *sjöstedti* Popp., *maura* Popp., *alluaudi* Popp., *heynei* Reut., *jeanneli* Popp. and *cardiostethoides* Popp. from British East Africa, Kenya and northern Tanganyika; *oblongus* Reut. from Abyssinia; and *niger* (Wolff) and *albidipennis* Reut. from North Africa. As this species from the Transvaal does not agree in essential characters with the descriptions of any of the forms enumerated above, and as it is to a certain extent of some economic importance in its biological relation to a citrus pest, it is described as a new species.

***Triphleps thripoborus* sp. nov. (Fig. 1).**

Body elongate, oval and shining, with the head, thorax, scutellum and body below more brilliantly shining black; hemelytra slightly less shining or polished in appearance. *Head* black, dark piceous brownish to very dark blackish brown, a little broader than long across eyes; upper surface smooth, discally slightly transversely depressed just behind ocelli, the base however transversely convex, with a submedial groove-like depression on each side anteriorly in front of eyes, with 3 erect dark hairs on each side above: one nearer apex in front, one at about level of anterior margin of eye and one behind ocellus; the rest of the surface above with some sparse fine pale hairs; ocelli yellowish; eyes yellowish brown, brownish to dark piceous brownish, distinctly longer than broad above and about as long as deep from side; interocular space, at narrowest part, subequal to, or a little broader than, length of eye; antennae longer than combined length of head and pronotum along middle, but a little shorter than length of head and pronotum along sides from

apex of labrum to posterior pronotal angle, distinctly more thickened in ♂♂, especially joints 2 and 3, covered with moderately long pale hairs on joints 2-4, with joint 1 yellowish to yellowish brownish, short, just about reaching and not extending beyond apical level of labrum, joint 2 straw-coloured yellowish to yellowish, becoming slightly thicker apically even in ♀♀, longer than the other joints and in ♂♂ relatively longer than in ♀♀, in both sexes slightly longer than interocular space, joint 3 either yellowish and becoming yellowish brownish apically or predominantly yellowish brownish to dark brownish in some specimens, subequal in length to, or a little shorter than, interocular space, and either subequal in length to, or a little shorter than, joint 4, the latter somewhat flattened, distinctly appearing reddish or brownish rufous to ferruginous in certain lights, its base sometimes darker, with joints 3 and 4 combined very much longer than 2; rostrum shining, predominantly yellowish brownish to dark blackish brown, the apical part of joint 2 and base of 3 slightly paler and more yellowish, especially in ♂♂, the apex more blackish, extending to between front coxae, with the downwardly directed joint 1 short, joint 2 the longest and subequal in length to, or a little longer than, antennal joint 2, joint 3 sharply pointed and subequal to, or a very little longer than, antennal joint 4.

Pronotum black or dark piceous brownish or blackish brownish, covered with fine depressed yellowish hairs and with a longish dark bristle-like hair on each side laterally near anterior angle, another more submedially anteriorly on each side more or less in line with ocellus, and one on each side laterally just in front of posterior pronotal angle; anterior margin straight, about as broad as, or only a little narrower than, pronotum is long in the middle, with its collar-like constriction faint but distinct; lateral margins almost straight for most of their length, but anteriorly narrowed and rounded, carinate, slightly more distinctly and more broadly so towards anterior angle; posterior margin broadly emarginate, more than twice as wide as anterior margin, the ratio of posterior margin to anterior margin in ♀♀ being more or less as 19 or 20: 7 or 7.5 and in ♂♂ as 18:7; disc distinctly and strongly transversely depressed just behind the middle, the depression slightly concave anteriorly and not reaching sides, the part anterior to depression convex, smooth, shining and callus-like discally, the anterior part behind apical margin somewhat obscurely transversely wrinkled, the more flattened part posterior to depression sloping gradually to lateral margins and faintly transversely, though rather obscurely, ruguloso-punctate discally, the shallow punctures rather scattered and the sides towards posterior angles more or less smooth.

Scutellum shining black or dark piceous brownish to dark blackish brown, covered with fine decumbent yellowish hairs and with a longish dark bristle-like hair on each side basally near basal angle; the scutellum a little longer than length of pronotum in the

middle, transversely convex basally and distinctly transversely depressed just beyond middle; apical part beyond depression obscurely and faintly transversely rugulose, and with the depression and declivous part in front of it very indistinctly and obscurely transversely ruguloso-punctate.

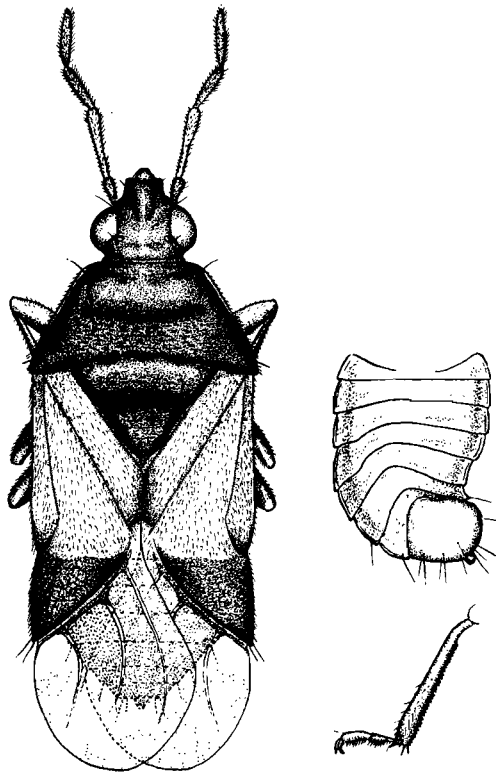


Fig.1. *Triphleps thripoborus* sp. nov. Dorsal view of ♀; ventral view of abdomen of ♂; anterior tibia and tarsus of ♂. (A. J. Hesse del.).

Hemelytra with the clavus, corium and embolium predominantly straw-coloured yellowish to yellowish, the extreme apex and apical margin of clavus and apex of embolium blackish brown to piceous brownish, the clavus and corium more translucent than embolium, the cuneus dark blackish brown or piceous brownish, shining and opaque, sometimes slightly paler and more brownish, or even yellowish brown, in some ♂♂; upper surface covered with faint somewhat scattered punctures, these small punctures provided with very short decumbent yellowish hairs; cuneus with distinctly more

rugose sculpture, and with one, or sometimes two, longish dark hairs near its apical angle; membrane clear glassy hyaline in basal part or basal half, distinctly, though often faintly, infused with smoky brownish to a variable extent in apical half or apical part in ♀♀, less extensively and also less distinctly in ♂♂, the surface of membrane showing rainbow-like effects of alternate red and bluish-green iridescence in certain lights, its transverse basal vein usually darkened to a variable extent, its longitudinal veins in the form of 3 very obscure, sometimes scarcely visible, transparent veins.

Wings glassy hyaline, with bluish-green and to a certain extent reddish opalescence in different lights; the hamus of discal cell distinctly remote from the origin of the vena decurrens, its distance from the point of origin of the latter being sometimes subequal in length to the vena connectens or sometimes scarcely, or only a very little, shorter than the latter.

Sternum shining black to dark piceous brownish or blackish brownish, sometimes even infused with castaneous or even yellowish brownish in some specimens, finely rugosely wrinkled, and with fine decumbent yellowish hairs.

Abdomen shining below, black to dark piceous brownish or blackish brown above and below, sometimes tending to be predominantly pale yellowish brownish in varietal forms, with the ovipositor and apical part of venter in ♀♀ and the genital part in ♂♂ almost always tending to be paler brownish or yellowish brownish than rest of venter below; venter smooth discally below, microscopically punctured along the connexival part, which puncturation in each ventrite extends downwards for some distance nearer hind margin as a transverse band, the punctures with fine depressed yellowish hairs; genital plates in ♀♀ also with sparse yellowish hairs; abdomen on each side in ♀♀, from ventrite 6 to apex, with a row of about 4 longish dark hairs and also with some dark hairs towards apex of the genital plates on each side below; abdomen in ♂♂ (Fig. 1, upper righthand figure) asymmetrically twisted or curved to the left, its apical part lobe-like and rounded, with some longish dark hairs along its right side from ventrite 6 to apex of genital lobe, and with only one hair on left side near apex.

Legs shining, the coxae, basal half or base of front femora, the entire middle and hind femora, and middle and hind tibiae, sienna brownish in ♀♀, with the apical part or half of front femora, the entire front tibiae, the extreme apices of the other tibiae and to a lesser extent the extreme bases, the basal halves or more of tarsi, and to a certain extent also the trochanters yellowish, in ♂♂ the femora and tibiae are either predominantly yellowish or with only the apical halves of hind femora and greater part of hind tibiae, and the apical parts of the tarsi sienna brownish; both femora and tibiae with fine yellowish hairs, the tibiae with fine bristles especially along lower parts; front tibiae in ♂♂ (Fig. 1, lower righthand figure)

without bristles below, but with a row of small black teeth-like or dentate spines which are arranged contiguously like the teeth of a saw.

Length of body (incl. membrane) about 1.8—2.12 mm. (♂♂ tending to be slightly smaller than the ♀♀).

Breadth across hind part of pronotum: about .72—.8 mm.

Described from 8 ♂♂ and 11 ♀♀ of which 4 ♂♂ and 4 ♀♀ are preserved in spirit. The types have been deposited in the Entomological Department of the University of Pretoria.

Locality:—Transvaal: Rustenburg (coll. E. Bedford, on Citrus-foliage 21/XI/39 (Types); on peach-foliage 21/IV/39; on Acacia-foliage 17/VI/39; on Citrus-foliage VI/39; reared on Thrips-larvae 26/XI/39.)

Two ♂♂ and 1 ♀ differ from the types and other paratypes in being much paler; the head, thorax and scutellum above being more castaneous brownish; cuneus entirely opaquely yellowish brownish, becoming darker apically; pleurae infused with more yellowish; abdomen above and below predominantly yellowish or pale yellowish brownish; legs with the femora predominantly yellowish and even the tibiae predominantly yellowish. As there appear to be no structural or other specific differences between these specimens and the typical forms, it is presumed that they merely represent a paler variety or are teneral forms which have been caught soon after the last nymphal moult.

Compared with the description of *brunnescens* Popp., the only species previously described from South Africa (Simonstown and Fish Hoek) by Poppius in 1913, this species differs in having the head distinctly broader than long; antennal joint 2 comparatively longer, and much longer than width of interocular space; hind margin of pronotum distinctly more than twice as broad as anterior margin; hemelytra with the pale parts paler, more yellowish, not yellowish brown; clavus darkened apically and not basally; membrane only tinted smoky or brownish in apical half or part; femora and tibiae in ♂♂ and anterior tibiae in ♀♀ predominantly yellowish.

This species also appears to be related to some varieties of the Palaearctic and North African species *niger* (Wolff). Compared with descriptions of the latter, it appears to differ chiefly in not having dense and strongly aciculate or strigose sculpture on posterior half of pronotum.

In connection with the predatory habits of this species, it is interesting to note that representatives of the Anthocoridae have been recorded as preying on Aphids and other insects. Species of *Triphleps* which have been recorded as preying on other insects are: the American species, *insidiosus* Say, which, according to Garman and Jewell (*Agric. Exp. Sta. Kentucky Lexington Bull.* 187, 1914), feeds on the eggs of the moth *Heliothis obsoleta* H.S.; another American

species, *tricolor* (White), which according to Colcord (*Assoc. Ec. Ent.*, 1905-1929) and quoted by Quayle (p. 42, "Insects of Citrus and other subtropical fruits", 1938) preys on mites and various insects; and *australis* China (p. 361, *Bull. Ent. Res.* xvi, 1926) which is reported as feeding on the eggs of *Heliothis obsoleta* H.S. in Australia.

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